

REMARKS

The above amendments and following remarks are responsive to the final Office Action mailed August 26, 2004. Upon entry of the above amendments, Claims 1-7 will have been amended. Claims 1-7 will be pending. No new matter has been introduced. No new issues have been raised that require further consideration or search. Entry and reconsideration are respectfully requested.

Response to the Rejections under 35 U.S.C. § 112, First Paragraph

Claims 1-7 have been rejected under 35 U.S.C. § 112, First Paragraph, “as failing to comply with the written description requirement.” The Examiner urges that this rejection is based upon newly added features in the claims, which are not described in the specification so as to reasonably convey to one skilled in the art that the inventor had possession thereof.

Applicant has amended Claims 1-7 to overcome the rejection under 35 U.S.C. § 112, First Paragraph. Accordingly, the rejection under 35 U.S.C. § 112, First Paragraph, is moot and should be withdrawn.

Response to Objection to the Claims

Claims 1-7 have been objected to on the basis of various identified informalities with respect to Claims 1, 6, and 7.

Applicant has amended Claims 1-7 to overcome the Examiner’s objection thereto. Accordingly, the objection of Claims 1-7 is moot and should be withdrawn.

Response to Rejection under 35 U.S.C. § 103(a)

Claims 1, 2, and 4-7 have been rejected under 35 U.S.C. § 103(a) as being obvious over US Patent 4,101,195 to Frosch et al. (Frosch). Claims 3 and 7 have been rejected under 35 U.S.C. § 103(a) as being obvious over Frosch as applied to Claim 1 above, and further in view of German Patent Publication DE 43 07 831 A1. Applicant traverses these rejections.

Independent Claim 1 has been amended to recite an observation device for acquiring two images corresponding to a scene viewed from two different aiming directions including:

“a plurality of tertiary reflection means symmetrically disposed about said optical axis of said primary mirror and on a side of said primary mirror opposite from a side of the primary mirror on which said secondary reflection means is disposed, and image acquisition means for receiving light reflected by said plurality of tertiary reflection means,

characterized in that said secondary reflection means comprises a mirror situated on said optical axis of said primary mirror, said primary mirror and said secondary reflection means being dimensioned in such a manner that the beams which are incident on said primary mirror with said two respective angles θ_1 and θ_2 are focused respectively on said plurality of tertiary reflection means for focusing incident light beams onto said image acquisition means.”

The observation device of the present application allows the acquisition of two images that correspond to the same scene viewed at two different angles of incidence. Advantageously, the observation system may be utilized on board an Earth orbiting satellite, for example, to observe the same scene at two different instants with different aiming directions. Obtaining two images corresponding to either the same scene viewed at two different angles of incidence or the same scene at two different instants with different aiming directions, permit the acquisition of stereoscopic image acquisition for satellite observation.

Applicant respectfully submits that Frosch does not teach or suggest an observation system for acquiring two images corresponding to a scene viewed from two different aiming directions as recited in independent Claim 1, and in particular, a plurality of tertiary reflection

means disposed about the optical axis of the primary mirror, wherein the plurality of tertiary reflection means acts to focus incident light beams onto the image acquisition means. In the August 26, 2004 final Office Action, the Examiner urged that the tertiary mirror 20 and the plane mirror 40, as disclosed by Frosch, were collectively readable on the “tertiary mirror means” as recited in Applicant’s Claim 1.

In contrast, Frosch discloses an anastigmatic three-mirror telescope utilizing a primary mirror 10, a secondary mirror 16, a tertiary mirror 20, and a larger plane, or fold, mirror 40 that ultimately reflects and focuses light beams to the final image plane 32 via the opening 42 in the larger plane, or fold, mirror 40. Such a configuration, as disclosed by Frosch, minimizes obstruction by avoiding use of a spider 26 (shown in Figure 1) and significantly improves the baffling of the system. Frosch, however, does not teach or suggest an observation device for acquiring two images corresponding to a scene viewed from two different aiming directions having a plurality of tertiary reflection means disposed about the optical axis of the primary mirror, wherein the plurality of tertiary reflection means acts to focus incident light beams onto the image acquisition means as recited in Applicant’s independent Claim 1. No where is it seen with the disclosure of Frosch, where Frosch teaches or suggests an observation device for acquiring two images corresponding to a scene viewed from two different aiming directions including an arrangement of a plurality of tertiary mirror 20 and larger plane, or fold, mirrors 40 combinations disposed about the optical axis of the primary mirror 10, which act to focus incident light beams onto an image acquisition means, as is recited in Applicant’s independent Claim 1. As such, the observation device recited in Claim 1 is distinguished over the reference of Frosch. Claims 2-7, which depend from independent Claim 1, are distinguished over Frosch for at least the same reasons discussed above with respect to Claim 1.

As referred to above, Claims 3 and 7 have been rejected under 35 U.S.C. 103(a) as being obvious over Frosch in view of DE 43 07 831 A1 (The German Patent Publication). For at least the same reasons as discussed above with respect to independent Claim 1, Claims 3 and 7, which ultimately depend from Claim 1, are distinguished over Frosch and the German Patent Publication. No where is it seen within the disclosures of Frosch and the German Patent Publication is it seen where Frosch and the German Patent Publication, either alone or in combination, teach, suggest, motivate, or otherwise render obvious, the observation system as recited in Applicant's claims. On this basis alone, the subject matter recited in dependent Claims 3 and 7 are distinguished over the disclosures of Frosch and the German Patent Publication, either alone or in combination. Accordingly, the rejection under 35 U.S.C. § 103(a) over Frosch in view of the German Publication should be withdrawn.

Response to the Objection of the Drawings

The drawings have been objected to on the basis that "the amended feature concerning the two respective angles of incident recited in amended claim 1 must be shown or the feature(s) canceled from the claim(s)."

Applicant has amended each of Figure 1, i.e., drawing sheet 1/3 to include the two respective angles of incident θ_1 and $-\theta_1$ relative to the optic axis of the primary mirror. As referred to above, the attached drawing sheet 1/3 replace original Figure 1. Accordingly, the objection to the drawings is now moot and should be withdrawn.

CONCLUSION

Applicant respectfully submits that Claims 1-7 are in condition for allowance and a notice to that effect is earnestly solicited.

AUTHORIZATION

The Commissioner is hereby authorized to charge any fees which may be required for filing this response to restriction requirement to Deposit Account No. 13-4503, Order No. 3401-4025.

Respectfully submitted,

MORGAN & FINNEGAN, L.L.P.

Dated: November 22, 2004

By: 

Bryan W. Brown

Registration No. 47,265

(202) 857-7887 Telephone

(202) 857-7929 Facsimile

Correspondence Address:
MORGAN & FINNEGAN, L.L.P.
3 World Financial Center
New York, New York 10281-2101
(212) 415-8700 Telephone
(212) 415-8701 Facsimile

AMENDMENTS TO THE DRAWINGS

The attached drawing sheet 1/3 includes changes to Figure 1, which provides depiction of the two respective angles of incidence θ_1 and $-\theta_1$ relative to an optical axis of the primary mirror, as recited in the claims. This sheet replaces original Figure 1, original drawing sheet 1/3.

Attachment: Replacement sheet 1/3.